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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/960,691	09/21/2001	Dan Nobbe	CS10951	5227

20280 7590 07/14/2005

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EXAMINER	
NGUYEN, LEE	
ART UNIT	**PAPER NUMBER**
2682	

DATE MAILED: 07/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/960,691	NOBBE ET AL	
	Examiner	Art Unit	
	LEE NGUYEN	2682	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-12 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-12 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The IDS filed 6/27/2005 has been considered and recorded in the file.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-4, 6-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Kazuhiko et al. (JP Publication No. 2000-244342).

Regarding claim 1, Kazuhiko teaches an apparatus for directing a radio frequency (RF) transmit (Tx) signal within a specific Tx band to a separate path, (fig. 1), comprising: a switch 107; a first filter 108 coupled to the switch 107 to receive a switched Tx signal 104 and produce a first filtered Tx signal 110; and a second filter 109 coupled to the switch 107 to receive the switched Tx signal 110 and produce a second filtered Tx signal 112;

wherein the switch 107 connects to one of the first and second filters 108, 109 based upon a channel assignment of the Tx signal within the specific Tx band, see [0016].

Regarding claim 2, Kazuhiko also teaches that the first filter 108 has a first passband 889-898 MHz within the Tx band and inherently provides higher insertion loss outside of the first passband than inside of the first passband, see MPEP 2114.

Regarding claim 3, Kazuhiko further teaches that the second filter 109 has a second passband 925-960 MHz different from the first passband within the Tx band and inherently provides higher insertion loss outside of the second passband than inside of the second passband, see MPEP 2114.

Regarding claim 4, Kazuhiko also teaches that the first passband and the second passband, both being within the Tx band, have no common frequency range (see the rejection of claims 2-3).

Regarding claim 6, Kazuhiko further teaches a modulator 103 (fig. 1) coupled to the switch 107, producing the Tx signal having a Tx signal frequency substantially equal to a desired RF Tx frequency, see [0016].

Regarding claim 7, Kazuhiko also teaches a second switch 113 coupled to the first and the second filters 108, 109 (fig. 1) wherein the second switch 113 is connected to one of the first and the second filters 108, 109 based upon the channel assignment within the specific Tx band, and produce a second switched Tx signal 112, see [0016].

Regarding claim 8, Kazuhiko also teaches a power amplifier (PA) 115 (fig. 1) coupled to the second switch 113 to receive the second switched Tx signal 112 and produce an amplified Tx signal for transmission at a PA output 119.

Regarding claim 9, Kazuhiko teaches an apparatus for generating a radio frequency (RF) transmit (Tx) signal having reduced noise by directing a RF Tx signal within a specific Tx band to a separate path (fig. 1), comprising: a modulator 103 producing the Tx signal having a Tx signal frequency

substantially equal to a desired RF Tx frequency; a first switch 107 coupled to the modulator to receive the Tx signal 104; a first filter 108 coupled to the first switch 107 to receive a first switched Tx signal 104 and produce a first filtered Tx signal 110, having a first passband 889-898 MHz within the Tx band and inherently provides higher insertion loss outside of the first passband than inside of the first passband, see MPEP 2114; a second filter 109 coupled to the first switch 107 to receive the first switched Tx signal 104 and produce a second filtered Tx signal 111, having a second passband 925-960 MHz different from the first passband within the Tx band and inherently provides higher insertion loss outside of the second passband than inside of the second passband, see MPEP 2114; a second switch 113 coupled to the first and second filters 108, 109 to receive the first and the second filtered Tx signal, respectively, producing a second switched Tx signal 112; and a power amplifier (PA) 115 coupled to the second switch 113 to receive the second switched Tx signal 112 to produce an amplified Tx signal for transmission at a PA output 119; wherein the first and the second switches connect to one of the first and the second filters based upon a channel assignment of the Tx signal within the specific Tx band, see [0016].

Regarding claim 10, Kazuhiko teaches a method for generating a radio frequency (RF) transmit (Tx) signal having reduced noise by directing a RF Tx signal within a specific Tx band to a separate path comprising steps of: determining an appropriate path 108 or 109 (fig. 1), which is one of a plurality of paths each having a bandpass filter 108, 109, for the Tx signal based upon a channel assignment of the Tx signal, see [0016]; establishing the appropriate path for the Tx signal 108 or 109; and sending the Tx signal through the appropriate path 108 or 109.

Regarding claim 10, the claim is interpreted and rejected for the same reason as set forth in claim 4.

Regarding claim 12, Kazuhiko also teaches that the appropriate path has the bandpass filter 108 or 109 having the passband encompassing the channel assigned to the Tx signal, see [0016].

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kazuhiko in view of Phillip et al. (US 5,867,535).

Regarding claim 5, Kazuhiko fails to teach that the first passband and the second passband, both being within the Tx band, overlap. According to

Phillip, the passbands of two filters in a transmitter can be overlapped (col. 19, 59-62). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the overlapping bands of Phillip to the transmit bands of Kazuhiko in order to have more bandwidth for the system.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ishida et al. (US Patent 5,926,466) teach branching filters for the appropriate path (see fig. 4).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LEE NGUYEN whose telephone number is (571)-272-7854. The examiner can normally be reached on 8:00 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, NICK CORSARO can be reached on (571)-272-

7876. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

7/7/05

LEE NGUYEN
Primary Examiner
Art Unit 2682